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ABSTRACT

The originator of the communication apprehension (CA) construct has consistently maintained that communication apprehensive people should not be expected to exhibit anxious behaviors. On the other hand, inept and incompetent communicative actions constitute the reticence syndrome, clearly a construct defined through behaviors. Noting that it is important that communication researchers compare and distinguish between these cognitive-affective and behavior constructs, a study examined the relationship of behaviors to CA and to reticence. Undergraduate basic communication students completed the Personal Report of Communication Apprehension (PRCA-24) and the Verbal Reticence Scale two-weeks prior to participating in randomly selected and assigned dyadic interactions. Subjects in the dyads participated for eight minutes with confederates who were trained to react neutrally and consistently with all partners in a "get acquainted" activity. Interactions were videotaped. Participants then completed the Communication Apprehension Index. Five behaviors consistently reported as indicative of CA or reticence were selected for coding: (1) number of words spoken, (2) lengthy pauses, (3) gaze avoidance, (4) disfluencies, and (5) disclaimers. The results did not support the hypothesis that behaviors would demonstrate stronger relationships with reticence than with trait CA. The conceptualization of CA as a cognitive construct is supported by the data, but the absence of behaviors correlating with reticence and the corresponding strong reticence/cognition relationship raises questions regarding the definition of the reticence construct and its operationalization. A three-page list of references concludes the document. (HTH)

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Behavioral Correlates of Trait CA and Reticence:

Not as Clear as We Thought

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Mulac and Wiemann address an important issue concerning apprehensive or reticent individuals when they state, "... it is anxious behavior that results in negative attributions, not merely feeling anxious...." (1984, p. 108). Co-communicators may not immediately see these anxious feelings, but they do have to interact with people who minimize participation, appear distant, and generally put an undue communication burden on their partners. Thus, the internal feeling of fear or anxiety may cause people to communicate ineffectively, but the feelings themselves do not cause negative evaluations. It is therefore appropriate to study the behaviors which result from high levels of anxiety and cause problems for apprehensive or reticent people.

The originator of the CA construct, James McCroskey, has consistently maintained that communication apprehensive people should not be expected to exhibit anxious behaviors. Communication apprehension is viewed as a cognitive-affective construct, by definition an internal state, and therefore not linked directly to behavior (McCroskey, 1981; 1984; McCroskey, Richmond, & Davis, 1985).

On the other hand, inept and incompetent communicative actions constitute the reticence syndrome, clearly a construct defined through behaviors (Phillips, 1968; 1981; McCroskey, 1981). It is important that communication researchers compare and distinguish between cognitive-affective and behavioral constructs (such as CA and reticence) in order to provide a clearer conceptual framework for both theoretical and pedagogical extensions (Leary, 1983).

Specifically, CA should not exhibit a direct relationship with nonverbal behaviors but rather with cognitions about communicating. Reticence, by comparison, ought to be associated with nonverbal behaviors but cognitions or fears are not requisite components of the construct. Hence, the primary hypothesis of this study is:

H_1: Nonverbal behaviors will be more closely related to reticence than to trait communication apprehension.

In addition, the communication field has persistently linked trait CA or reticence with a) specific problematic behaviors in communication, or b) the alteration of those problems following treatment (see Goss, Thompson & Olds, 1978; Watson & Dodd, 1984). Therefore, in order to enhance anxious individuals' communicative competence, it seems advisable for educators to identify the kinds of behavioral disruption expected to occur. Several studies have demonstrated correlations of behaviors with either CA or reticence, however both constructs are not typically examined within the same project. In order to more broadly investigate the trait-behavior link a more general research question is also proposed:

R_1: What behaviors show relationships with either trait CA or reticence?

Literature Review

The literature on communication apprehension and reticence often addresses the way individuals feel about their own communication or the way other people perceive reticent or apprehensive individuals. However, for the purposes of this analysis only those studies which directly examine and measure the relationship

of CA or reticence to behavior will be reviewed.

One of the most consistent findings in the literature on communication apprehension and reicence is the lower level of participation demonstrated by CA or reticent individuals. Anxious individuals simply do not talk as much as non-anxious individuals across a variety of contexts. Lustig and Grove (1975), Jablin and Sussman (1978), and Mortensen, Arntson, and Lustig (1977) all reported restricted communication in group settings. Pilkonis (1977) and Phillips (1968) found that anxious or reticent people participated less in dyadic interactions. Daly and Lawrence (1985) found significant differences by anxiety level in the amount subjects spoke into a tape recorder. In the public speaking situation, highly anxious students typically speak for shorter times than low anxious students (Beatty, Forst, & Stewart, 1985).

Reticent or CA individuals also have less eye contact with their communication partners. Burgoon and Koper (1984), Steffen and Redden (1977) and Pilkonis (1977) all report more gaze avoidance in dyadic interactions. In the public speaking context high CA's tend not to look at the audience as much as low CA's (Daly & Lawrence, 1985; Mulac & Sherman, 1974).

A third nonverbal behavior linked with CA and reticence is pausing. The communication of anxious individuals is marked by "awkward" or "excessive" silences. This is most apparent in either the public speaking context (Daly & Lawrence, 1985; Friemuth, 1976; Pearson & Turner, 1984) or the dyadic context (Dow, Glaser, and Biglan, 1980; Pilkonis, 1977; Steffen & Redden, 1977; Wiemann, 1977) since it is in these contexts that speaker turn or responsibility can be most clearly ascertained.

Disfluency in communication interaction also tends to be related to anxiety level. Mahl (1956), Siegman and Pope (1965), and Kasl and Mahl (1958) reported that disfluencies such as misspeaking and stammering increased in dyads. Similarly, Mulac and Sherman (1974) and Goss, Thompson, and Olds (1978) indicated that more anxious speakers in public settings exhibited higher rates of disfluency. Thus apprehensive communicators appear to be less fluent and have more difficulty producing words than their non-apprehensive counterparts.

Finally, reticent speakers tend to make disclaiming or apologetic presentations (Arkin, 1981). Phillips and Metzger (1973), Phillips (1968), and Pearson and Turner (1985) noted such behavior in a variety of contexts. Anxious communicators seem to expect negative evaluations and therefore attempt to avert responsibility for their communication by disclaiming. This strategy is evidently ineffective, however, because anxious individuals' communication is rated generally more tense and less competent (Daly & Lawrence, 1985; Friemuth, 1976; Goss, Thompson, & Olds, 1978; Sorensen & McCroskey, 1977; Wiemann, 1977).

Other anxiety-related behaviors may also be exhibited but they tend to show less consistent relationships with CA or reticence. For example, Mulac and Sherman (1974) and Daly and Lawrence (1985) reported nervous gestures or excessive hand/arm movement as a sign of high anxiety. However, Pearson and Turner (1985), Pilkonis (1977) and Burgoon and Koper (1984) did not find excessive movement related to the constructs. Burgoon and Koper did indicate that facial blocking was related to high CA, but this finding is not common in the literature. Lamb (1978) did not find any behaviors related to anxiety in the public speaking context. (See Mehrabian (1982) or Mulac and Wiemann (1984) for

discussion of other inconsistencies in nonverbal behaviors associated with anxiety).

Thus, while anxiety measures are regularly reported to be related to behaviors, the domain of behaviors which can be reliably observed is not fully defined. For the purposes of this study only behaviors which have been observed across several studies, which have been reported by more than one research team, and which were observable in a dyadic setting were included for analysis.

Methodology

The PRCA-24 (McCroskey, 1982) and the Verbal Reticence Scale (Lustig, 1974) were administered to undergraduates in basic communication classes at a midwetern university two weeks prior to participation in the project. The two-week separation was to avoid contamination of personal disposition measures with both behavioral and cognitive immediate responses in the experimental situation. Obtained reliabilities were .93 for the PRCA and .94 for the V-R Scale.

Participants were randomly selected and assigned to dyadic interactions.[1] The dyadic context was chosen for its ecological validity. Although the dyad is not typically as threatening as a public speaking setting, (Booth-Butterfield, 1985; Daly & Buss, 1984; McCroskey & Beatty, 1984) the dyadic interaction has the advantage of being more naturalistic and representative of daily communication (Backlund, Brown, Gurry, & Jandt, 1982; Wiemann, 1977).

Participants interacted for eight minutes with confederates who were trained to react neutrally and consistently with all partners in a "get-acquainted" activity. Following their interaction they were taken to separate rooms where they completed the CAI Form State (Booth-Butterfield & Gould, in press). This 20-item scale assesses the level of anxiety resulting from a just-completed communication interaction. Obtained reliability was .91.

Seventy-nine confederate/participant dyads were videotaped for analysis. Prior to coding, four randomly designated, one-minute segments from each tape were transferred in random order to a second videotape. This method reduces potential coder involvement in the observed conversation and focuses attention on behavior within the segments. Transcripts were prepared from the final videotpes to enhance the detail and accuracy of coding.

Five behaviors which are consistently reported as indicative of CA or reticence were selected for coding. The behaviors included: number of words spoken, lengthy pauses (any pause on the subject's turn which lasted three or more seconds [McLaughlin & Cody, 1982], gaze avoidance, disfluencies (any word which appeared difficult to produce, was stammered, or repeated), and disclaimers (statements by the subject which apologized or denied responsibility for the communication).

Two coders were trained to observe and record the behaviors on each tape. Intercoder reliabilities ranged from .96 to .99 for all behaviors. The scores were also summed to provide an index of overall behavioral disruption. All counts were transformed to be directionally consistent and converted to z scores prior to summation in order to prevent over-weighing frequently occurring behaviors.

Results

This study hypothesized that behaviors would demonstrate stronger relationships with reticence than with trait CA. The results indicate no support for this hypothesis. None of the behaviors under study correlated significantly with reticence. While most behaviors did not correlate with trait CA either, the strength of the CA/behavior relationship was stronger than reticence/behavior relationship. This outcome is in direct opposition to the behavioral conceptualization of reticence. Table 1 shows the correlations of behaviors, state anxiety, and each trait.

Insert Table 1 about here

The research question probed more generally the types of behaviors associated with each construct. Word count was the only behavior which exhibited significant correlation with CA ($r = .37$). Instead, behaviors were more closely related to the individual's state anxiety score (CAS). Word count, gaze avoidance, and overall behavioral disruption were each significantly correlated with state anxiety. That is, as an individual reported being more nervous, he/she was also more likely to exhibit a variety of disrupted communication behaviors, to avoid making eye contact, and to minimize participation by talking less.

Several of the behaviors were related to each other, e.g., as awkward pauses increased, eye contact decreased and the amount of talk declined. Disfluencies were not directionally consistent with the other behavioral disruptions. In general (even with the adjustment for time talking) disfluency increased as the person talked more and was not related to trait or state anxiety. Thus in this study disfluencies seemed more an indication of increased word production rather than the inhibited word production typically associated with anxiety. In sum, the results of this project indicate very weak links between trait CA or reticence and any of the behaviors under study.

Discussion

In this study the only behavior significantly correlated with trait CA was the amount of talk in the dyad. This finding is consistent with numerous studies which conclude that high CA individuals simply participate less across a variety of contexts. Whether measured by duration of talk, proportion of conversation, or the number of words produced in the interaction as in this study, high CA's allow their co-interactants to do most of the talking. In addition, the immediate state of fear and tension in response to the communicative setting was strongly related to a person's dispositional level of apprehension. This finding is also consistent with other communication research in that the predisposition leads to greater intensity of the feeling when the situation is actually confronted (Booth-Butterfield & Gould, in press; McCroskey & Beatty, 1984).

The reticence construct which was expected to demonstrate stronger correlations with behaviors actually exhibited weaker relationships than did CA. Even the summed behavioral disruptions which we might expect to show a stronger relationship with a personality trait (Hewes & Haight, 1979) exhibited no such relationship.

The conceptualization of CA as a cognitive construct is supported by this data. The strong relationship between dispositional CA and the immediate state

of anxiety (r = .54) indicates that people who say they typically fear communicating in a variety of contexts actually do respond with higher levels of fear when put into a communication situation. The lack of behavioral correlates with CA does not alter the CA conceptualization, but rather is consistent with it.

However, the absence of behaviors correlating with reticence and the corresponding strong reticence/cognition relationship raises questions regarding the definition of this construct and its operationalization. It is possible that individuals are not sufficiently aware of their specific nonverbal behaviors to report them reliably as the V-R scale requires. Alternately, reticence may not be as clearly behaviorally-based as stated construct distinctions suggest. The latter explanation implies that an adjustment is needed in the conceptualization of reticence if the construct is to provide useful and unique information for the field of communication.

It should also be recognized that these results are somewhat discrepant with studies which report behaviors correlated with trait apprehension. Possible explanations include differences in a) operationalizations of the anxiety construct, b) the methods of observing interactions, and c) the actual measurement of observed behaviors.

Studies reporting behavioral correlates with anxiety employ a variety of operationalizations. Some use the PRCA-25 or another version focusing on public speaking situations, others combine items selected from various scales to indicate trait anxiety, and still others use the PRCA-24 which measures apprehension in four contexts. All items on the PRCA-24 assess the cognitive/affective dimensions of communication and therefore logically will tap into those aspects. Since behavior is not expected to be directly related to CA the scale does not assess behavioral enactment. (See Leary, 1983, for discussion of the problems of item confounds on some scales). Thus the fact that this study did not find most behaviors related to trait CA when other studies have noted such links, may be due to behavioral questions incorporated in other anxiety scales.

A second explanation for these results entails differences in observing and recording behaviors. Some researchers train naive, unacquainted coders as in this project (Burgoon & Koper, 1984; Pilkonis, 1977; Siegman & Pope, 1965). Other studies employ the subject's peers to record the behavioral disruptions (Goss, Thompson & Olds, 1978; Pearson & Turner, 1985; Sorensen & McCroskey, 1977). The use of peer-observers raises questions about the validity of the data due to history with the subjects (Campbell & Stanley, 1963) and the well-documented negative perceptions regarding apprehensive people (Daly, McCroskey, & Richmond, 1977; Hurt & Preiss, 1979; McCroskey, 1977; McCroskey & Richmond, 1976).

Several researchers have indicated that we are imperfect as observers and tend to fill in missing data according to our expectations (Hewes & Haight, 1979; Mischel, 1968). These observer deficiencies are especially noticeable in classroom ratings where raters may be more lenient and respond to halo effects on classmates (Bock & Bock, 1982; Bohn & Bohn, 1985). Given this information, it may be impossible for acquainted evaluators to objectively rate the behavior of highly reticent or apprehensive subjects. If the observers in a research project have interacted with or even observed the subjects at different times, it is

likely that their perceptual ratings will be contaminated by this additional information.

Further, most studies allow coders to observe the entire interaction or speech prior to rating behaviors. Such a procedure may allow coders to become involved in the interaction and subsequently evaluate performance based on factors other than the specific behaviors under scrutiny. The method employed here, that of transferring segments in random order for coding (employed by Mulac & Sherman, 1974), is intended to focus coder attention on nonverbal behaviors rather than the context or content of the interaction.

The lack of behavioral correlates for CA or reticence in this study may also be explained by the actual measurement of observed behaviors. Most studies claiming to code behavior actually code perceptions of the behavior. For example, Burgoon and Koper (1984) employed 7-point semantic differential scales to assess the degree to which a person made eye contact, nodded, or leaned away. Similarly, Pearson and Turner (1985) and Sorensen and McCroskey, (1977) used perceptions of more global behaviors rather than close counts of the nonverbal actions.

By contrast, Pilkonis (1977), Kasl and Mahl (1965), Siegman and Pope (1965), and the current study closely coded behaviors by counting frequency or timing the duration of every action under study. If differences between these two coding methods are apparent then it seems appropriate to ask which method gives a truer indication of anxious or avoidant behaviors - the behaviors actually exhibited or the behaviors perceived to be exhibited by subjects. Certainly this is an area deserving of further scrutiny and controlled study by speech communication researchers.

Conclusions

This study genderally supports the cognitive, no-behaviors-necessary definition of CA. Trait apprehension is strongly related to fear in an immediate communication situation, but behaviors are less directly related. Instead, actions appear more strongly associated with the immediate feeling of anxiety.

The absence of observed behaviors associated with reticence raises questions about the conceptualization of this construct. Reticence demonstrated a strong relationship with cognitive dimensions but no relationship with behavioral dimensions. Reticence therefore appears in need of direct construct validity testing if it is to provide unique information about communication transactions.

Finally, methodological differences may explain why other studies have reported behaviors correlated with CA while this study did not. Focused examination of communication outcomes as a function of different methods of observing and measuring behaviors is recommended.

Reference Note

1. This study was a part of the author's dissertation. For complete details concerning procedures, confederate and coder training, and validation, contact the author. Related portions of this research are also reported elsewhere (Booth-Butterfield & Booth-Butterfield, in press).

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Table 1

Correlation Matrix of Behaviors, Traits and State Anxiety

	CA	CAS	RET	BD	GAZE	PAUSE	WORD COUNT	DISF
CAS	.54							
RET	.68	.54						
BD	.13	.26	.09					
GAZE	.11	.29	.07	.66				
PAUSE	.03	.08	-.03	.71	.37			
WORD COUNT	.37	.30	.15	.48	.51	.42		
DISF	-.14	-.09	-.008	.24	-.16	-.09	-.46	
DISC	.02	.15	.05	.62	.15	.27	-.06	.23

N = 79

Correlation needed for alpha of .05 = .22; for alpha .01 = .28